being conducted outside of the Department of Transportation.

''(c) MEMBERSHIP.—The advisory committee shall be composed of not less than 20 and not more than 30 members appointed by the Secretary from among individuals who are not employees of the Department of Transportation and who are specially qualified to serve on the advisory committee by virtue of their education, training, or experience. A majority of the members of the advisory committee shall be individuals with experience in conducting surface transportation research and development. The Secretary in appointing the members of the advisory committee shall ensure that representatives of Federal, State, and local governments, other public agencies, colleges and universities, public, private, and nonprofit research organizations, and organizations representing transportation providers, shippers, labor, and the financial community are represented on an equitable basis.

''(d) CHAIRMAN.—The chairman of the advisory committee shall be designated by the Secretary.

''(e) PAY AND EXPENSES.—Members of the advisory committee shall serve without pay, except that the Secretary may allow any member, while engaged in the business of the advisory committee or a subordinate committee, travel expenses, including per diem in lieu of subsistence, in accordance with sections 5702 and 5703 of title 5, United States Code.

''(f) SUBORDINATE COMMITTEES.—The Secretary shall establish a subordinate committee to the advisory committee to provide advice on advanced highway vehicle technology research and development, and may establish other subordinate committees to provide advice on specific areas of surface transportation research and development. Such subordinate committees shall be subject to subsections (e), (g), and (i) of this section.

''(g) ASSISTANCE OF SECRETARY.—Upon request of the advisory committee, the Secretary shall provide such information, administrative services, support staff, and supplies as the Secretary determines to be necessary for the advisory committee to carry out its functions.

''(h) REPORTS.—The advisory committee shall, within 1 year after the date of establishment of the advisory committee, and annually thereafter, submit to the Congress a report summarizing its activities under this section.

''(i) TERMINATION.—Section 14 of the Federal Advisory Committee Act [5 U.S.C. App.] shall not apply to the advisory committee established under this section.''

FUNDAMENTAL PROPERTIES OF ASPHALTS AND MODIFIED ASPHALTS

Pub. L. 102–240, title VI, §6016, Dec. 18, 1991, 105 Stat. 2182, provided that:

''(a) STUDIES.—The Administrator of the Federal Highway Administration (hereinafter in this section referred to as the 'Administrator') shall conduct studies of the fundamental chemical property and physical property of petroleum asphalts and modified asphalts used in highway construction in the United States. Such studies shall emphasize predicting pavement performance from the fundamental and rapidly measurable properties of asphalts and modified asphalts.

''(b) CONTRACTS.—To carry out the studies under subsection (a), the Administrator shall enter into contracts with the Western Research Institute of the University of Wyoming in order to conduct the necessary technical and analytical research in coordination with existing programs which evaluate actual performance of asphalts and modified asphalts in roadways, including the Strategic Highway Research Program.

''(c) ACTIVITIES OF STUDIES.—The studies under subsection (a) shall include the following activities:

''(1) Fundamental composition studies.

''(2) Fundamental physical and rheological property studies.

''(3) Asphalt-aggregate interaction studies.

''(4) Coordination of composition studies, physical and rheological property studies, and asphalt-aggregate interaction studies for the purposes of predicting pavement performance, including refinements of Strategic Highway Research Program specifications.

''(d) TEST STRIP.—

''(1) IMPLEMENTATION.—The Administrator, in coordination with the Western Research Institute of the University of Wyoming, shall implement a test strip for the purpose of demonstrating and evaluating the unique energy and environmental advantages of using shale oil modified asphalts under extreme climatic conditions.

''(2) FUNDING.—For the purposes of construction activities related to this test strip, the Secretary and the Director of the National Park Service shall make up to $1,000,000 available from amounts made available from the authorization for parkroads and parkways.

''(3) REPORT TO CONGRESS.—Not later than November 30, 1995, the Administrator shall transmit to Congress as part of a report under subsection (e) the Administrator's findings on activities conducted under this subsection, including an evaluation of the test strip implemented under this subsection and recommendations for legislation to establish a national program to support United States transportation and energy security requirements.

''(e) ANNUAL REPORT TO CONGRESS.—Not later than 180 days after the date of the enactment of this Act [Dec. 18, 1991], and on or before November 30th of each year beginning thereafter, the Administrator shall transmit to Congress a report of the progress made in implementing this section.

''(f) AUTHORIZATION OF APPROPRIATIONS.—The Secretary shall expend from administrative and research funds deducted under section 104(a) of this title [probably means section 104(a) of Title 23, Highways] at least $3,000,000 for each of fiscal years 1992, 1993, 1994, 1995, and 1996 to carry out subsection (b).''

[For termination, effective May 15, 2000, of annual reporting provisions in section 6016(e) of Pub. L. 102–240, set out above, see section 3003 of Pub. L. 104–66, set out as a note under section 1113 of Title 31, Money and Finance, and page 139 of House Document No. 103–7.]

STUDY OF FACTORS AFFECTING SAFE AND EFFICIENT OPERATION OF BRIDGES, TUNNELS AND ROADS WITHIN UNITED STATES

Pub. L. 95–599, title I, §166, Nov. 6, 1978, 92 Stat. 2722, provided that: ''The Secretary of Transportation shall make a full and complete investigation and study of all those factors affecting the safe and efficient operation of bridges, tunnels, and roads within the United States, including, but not limited to, structural, operational, environmental, and civil disturbance factors.''

§ 503. Technology deployment

(a) TECHNOLOGY DEPLOYMENT PROGRAM.—

(1) ESTABLISHMENT.—The Secretary shall develop and administer a national technology deployment program.

(2) PURPOSE.—The purpose of the program shall be to significantly accelerate the adoption of innovative technologies by the surface transportation community.

(3) DEPLOYMENT GOALS.—

(A) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this section, the Secretary shall establish not more than 5 deployment goals to carry out paragraph (1).

(B) DESIGN.—Each of the goals and the program developed to achieve the goals shall be designed to provide tangible benefits, with respect to transportation systems, in the areas of efficiency, safety, reliability, service life, environmental protection, and sustainability.

(C) STRATEGIES FOR ACHIEVEMENT.—For each goal, the Secretary, in cooperation with representatives of the transportation community such as States, local governments, the private sector, and academia, shall use domestic and international technology to develop strategies and initiatives to achieve the goal, including technical assistance in deploying technology and mechanisms for sharing information among program participants.

(4) INTEGRATION WITH OTHER PROGRAMS.—The Secretary shall integrate activities carried out under this subsection with the efforts of the Secretary to disseminate the results of research sponsored by the Secretary and to facilitate technology transfer.

(5) LEVERAGING OF FEDERAL RESOURCES.—In selecting projects to be carried out under this subsection, the Secretary shall give preference to projects that leverage Federal funds with other significant public or private resources.

(6) CONTINUATION OF SHRP PARTNERSHIPS.—Under the program, the Secretary shall continue the partnerships established through the strategic highway research program established under section 307(d) (as in effect on the day before the date of enactment of this section).

(7) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary may make grants to, and enter into cooperative agreements and contracts with, States, other Federal agencies, universities and colleges, private sector entities, and nonprofit organizations to pay the Federal share of the cost of research, development, and technology transfer activities concerning innovative materials.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit an application to the Secretary. The application shall be in such form and contain such information as the Secretary may require. The Secretary shall select and approve an application based on whether the project that is the subject of the grant meets the purpose of the program described in paragraph (2).

(8) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall ensure that the information and technology resulting from research conducted under paragraph (7) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(9) ALLOCATION.—To the extent appropriate to achieve the goals established under paragraph (3), the Secretary may further allocate funds made available to carry out this section to States for their use.

(b) INNOVATIVE BRIDGE RESEARCH AND CONSTRUCTION PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and carry out a program to promote, demonstrate, evaluate, and document the application of innovative designs, materials, and construction methods in the construction, repair, and rehabilitation of bridges and other highway structures.

(2) GOALS.—The goals of the program shall include—

(A) the development of new, cost-effective, innovative highway bridge applications;

(B) the development of construction techniques to increase safety and reduce construction time and traffic congestion;

(C) the development of engineering design criteria for innovative products, materials, and structural systems for use in highway bridges and structures;

(D) the reduction of maintenance costs and life-cycle costs of bridges, including the costs of new construction, replacement, or rehabilitation of deficient bridges;

(E) the development of highway bridges and structures that will withstand natural disasters;

(F) the documentation and wide dissemination of objective evaluations of the performance and benefits of these innovative designs, materials, and construction methods;

(G) the effective transfer of resulting information and technology; and

(H) the development of improved methods to detect bridge scour and economical bridge foundation designs that will withstand bridge scour.

(3) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary shall make grants to, and enter into cooperative agreements and contracts with—

(i) States, other Federal agencies, universities and colleges, private sector entities, and nonprofit organizations to pay the Federal share of the cost of research, development, and technology transfer concerning innovative materials; and

(ii) States to pay the Federal share of the cost of repair, rehabilitation, replacement, and new construction of bridges or structures that demonstrate the application of innovative materials.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit an application to the Secretary. The application shall be in such form and contain such information as the Secretary may require. The Secretary shall select and approve the applications based on whether the project that is the subject of the grant meets the goals of the program described in paragraph (2).

(4) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall take such action as is necessary to ensure that the information and technology resulting from research conducted under paragraph (3) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(5) FEDERAL SHARE.—The Federal share of the cost of a project under this section shall be determined by the Secretary.

(c) INNOVATIVE PAVEMENT RESEARCH AND DEPLOYMENT PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and implement a program to promote, demonstrate, support, and document the application of innovative pavement technologies, practices, performance, and benefits.

(2) GOALS.—The goals of the innovative pavement research and deployment program shall include—

(A) the deployment of new, cost-effective, innovative designs, materials, recycled materials (including taconite tailings and foundry sand), and practices to extend pavement life and performance and to improve customer satisfaction;

(B) the reduction of initial costs and lifecycle costs of pavements, including the costs of new construction, replacement, maintenance, and rehabilitation;

(C) the deployment of accelerated construction techniques to increase safety and reduce construction time and traffic disruption and congestion;

(D) the deployment of engineering design criteria and specifications for innovative practices, products, and materials for use in highway pavements;

(E) the deployment of new nondestructive and real-time pavement evaluation technologies and techniques;

(F) the evaluation, refinement, and documentation of the performance and benefits of innovative technologies deployed to improve life, performance, cost effectiveness, safety, and customer satisfaction;

(G) effective technology transfer and information dissemination to accelerate implementation of innovative technologies and to improve life, performance, cost effectiveness, safety, and customer satisfaction; and

(H) the development of designs and materials to reduce storm water runoff.

(3) RESEARCH TO IMPROVE NHS PAVEMENT.—The Secretary shall obligate for each of fiscal years 2006 through 2009 from funds made available to carry out this subsection, $4,100,000 to conduct research to improve asphalt pavement, $4,100,000 to conduct research to improve concrete pavement, $4,100,000 to conduct research to improve alternative materials used in highways (including alternative materials used in highway drainage applications), and $2,450,000 to conduct research to improve aggregates used in highways on the National Highway System.

(d) SAFETY INNOVATION DEPLOYMENT PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish and implement a program to demonstrate the application of innovative technologies in highway safety.

(2) GOALS.—The goals of the program shall include—

(A) the deployment and evaluation of safety technologies and innovations at State and local levels; and

(B) the deployment of best practices in training, management, design, and planning.

(3) GRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS.—

(A) IN GENERAL.—Under the program, the Secretary shall make grants to, and enter into cooperative agreements and contracts with, States, other Federal agencies, universities and colleges, private sector entities, and nonprofit organizations for research, development, and technology transfer for innovative safety technologies.

(B) APPLICATIONS.—To receive a grant under this subsection, an entity described in subparagraph (A) shall submit to the Secretary an application at such time and containing such information as the Secretary may require. The Secretary shall select and approve an application based on whether the project that is the subject of the application meets the goals of the program described in paragraph (2).

(4) TECHNOLOGY AND INFORMATION TRANSFER.—The Secretary shall take such action as is necessary to ensure that the information and technology resulting from research conducted under paragraph (3) is made available to State and local transportation departments and other interested parties as specified by the Secretary.

(e) PROMOTIONAL AUTHORITY.—Funds authorized to be appropriated for necessary expenses for administration and operation of the Federal Highway Administration shall be available to purchase promotional items of nominal value for use in the recruitment of individuals and to promote the programs of the Federal Highway Administration.

(Added Pub. L. 105–178, title V, § 5103, June 9, 1998, 112 Stat. 427; amended Pub. L. 109–59, title V, §§ 5202(b)(1), (2), 5203(a), (b)(1), (c)(1), (d), Aug. 10, 2005, 119 Stat. 1786–1789.)

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsec. (a)(3)(A), (6), is the date of enactment of Pub. L. 105–178, which was approved June 9, 1998.

PRIOR PROVISIONS

A prior section 503, added Pub. L. 90–495, § 30, Aug. 23, 1968, 82 Stat. 831, related to administration of highway relocation assistance program, prior to repeal by Pub. L. 91–646, title II, § 220(a)(10), Jan. 2, 1971, 84 Stat. 1903.

AMENDMENTS

2005—Subsec. (a). Pub. L. 109–59, § 5203(a)(1), struck out ''INITIATIVES AND PARTNERSHIPS'' before ''PROGRAM'' in heading.

Subsec. (a)(1). Pub. L. 109–59, § 5203(a)(2), added par. (1) and struck out heading and text of former par. (1). Text read as follows: ''The Secretary shall develop and administer a national technology deployment initiatives and partnerships program.''

Subsec. (a)(7). Pub. L. 109–59, § 5203(a)(3), added par. (7) and struck out heading and text of former par. (7). Text read as follows: ''Under the program, the Secretary may make grants and enter into cooperative agreements and contracts to foster alliances and support efforts to stimulate advances in transportation technology, including—

''(A) the testing and evaluation of products of the strategic highway research program;

''(B) the further development and implementation of technology in areas such as the Superpave system and the use of lithium salts and other alternatives to prevent and mitigate alkali silica reactivity;

''(C) the provision of support for long-term pavement performance product implementation and technology access; and

''(D) other activities to achieve the goals established under paragraph (3).''

Subsec. (a)(8). Pub. L. 109–59, § 5203(a)(4), added par. (8) and struck out heading and text of former par. (8). Text read as follows: ''Not later than 18 months after the date of enactment of this section, and biennially thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the progress and results of activities carried out under this section.''

Subsec. (b)(1). Pub. L. 109–59, § 5202(b)(1), reenacted heading without change and amended text of par. (1) generally. Prior to amendment, text read as follows: ''The Secretary shall establish and carry out a program to demonstrate the application of innovative material technology in the construction of bridges and other structures.''

Subsec. (b)(2). Pub. L. 109–59, § 5202(b)(2), reenacted heading without change and amended text of par. (2) generally. Prior to amendment, text read as follows: ''The goals of the program shall include—

''(A) the development of new, cost-effective innovative material highway bridge applications;

''(B) the reduction of maintenance costs and life-cycle costs of bridges, including the costs of new construction, replacement, or rehabilitation of deficient bridges;

''(C) the development of construction techniques to increase safety and reduce construction time and traffic congestion;

''(D) the development of engineering design criteria for innovative products and materials for use in highway bridges and structures;

''(E) the development of cost-effective and innovative techniques to separate vehicle and pedestrian traffic from railroad traffic;

''(F) the development of highway bridges and structures that will withstand natural disasters, including alternative processes for the seismic retrofit of bridges; and

''(G) the development of new nondestructive bridge evaluation technologies and techniques.''

Subsec. (c). Pub. L. 109–59, § 5203(b)(1), added subsec. (c).

Subsec. (d). Pub. L. 109–59, § 5203(c)(1), added subsec. (d).

Subsec. (e). Pub. L. 109–59, § 5203(d), added subsec. (e).

HIGH PERFORMING STEEL BRIDGE RESEARCH AND TECHNOLOGY TRANSFER

Pub. L. 109–59, title V, § 5202(c), Aug. 10, 2005, 119 Stat. 1786, provided that:

''(1) IN GENERAL.—The Secretary [of Transportation] shall carry out a program to demonstrate the application of high-performing steel in the construction and rehabilitation of bridges.

''(2) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $4,100,000 for each of fiscal years 2006 through 2009 shall be available to carry out this subsection.''

STEEL BRIDGE TESTING

Pub. L. 109–59, title V, § 5202(d), Aug. 10, 2005, 119 Stat. 1787, provided that:

''(1) IN GENERAL.—The Secretary [of Transportation] shall carry out a program to test steel bridges using a nondestructive technology that is able to detect growing cracks, including subsurface flaws as small as 0.010 inches in length or depth, in the bridges.

''(2) FUNDING.—Of the amounts made available by section 5101(a)(1) of this Act [119 Stat. 1779], $1,250,000 for each of fiscal years 2006 through 2009 shall be available to carry out this subsection.

''(3) FEDERAL SHARE.—The Federal share of the cost of activities carried out in accordance with this subsection shall be 80 percent.''

§ 504. Training and education

(a) NATIONAL HIGHWAY INSTITUTE.—

(1) IN GENERAL.—The Secretary shall operate in the Federal Highway Administration a National Highway Institute (in this subsection referred to as the ''Institute''). The Secretary shall administer, through the Institute, the authority vested in the Secretary by this title or by any other law for the development and conduct of education and training programs relating to highways.

(2) DUTIES OF THE INSTITUTE.—In cooperation with State transportation departments, United States industry, and any national or international entity, the Institute shall develop and administer education and training programs of instruction for—

(A) Federal Highway Administration, State, and local transportation agency employees;

(B) regional, State, and metropolitan planning organizations;

(C) State and local police, public safety, and motor vehicle employees; and

(D) United States citizens and foreign nationals engaged or to be engaged in surface transportation work of interest to the United States.

(3) COURSES.—

(A) IN GENERAL.—The Institute shall—

(i) develop or update existing courses in asset management, including courses that include such components as—

(I) the determination of life-cycle costs;

(II) the valuation of assets;

(III) benefit-to-cost ratio calculations; and

(IV) objective decisionmaking processes for project selection; and

(ii) continually develop courses relating to the application of emerging technologies for—

(I) transportation infrastructure applications and asset management;

(II) intelligent transportation systems;

(III) operations (including security operations);

(IV) the collection and archiving of data;

(V) expediting the planning and development of transportation projects; and

(VI) the intermodal movement of individuals and freight.

(B) ADDITIONAL COURSES.—In addition to the courses developed under subparagraph (A), the Institute, in consultation with State transportation departments, metropolitan planning organizations, and the American Association of State Highway and Transportation Officials, may develop courses relating to technology, methods, techniques, engineering, construction, safety, maintenance, environmental mitigation and compliance, regulations, management, inspection, and finance.

(C) REVISION OF COURSES OFFERED.—The Institute shall periodically—

(i) review the course inventory of the Institute; and

(ii) revise or cease to offer courses based on course content, applicability, and need.